

Appl. No.: 10/062,622
Amdt. dated 11/30/2005
Reply to Office action of 08/31/2005

REMARKS

This amendment is submitted in reply to the final Office Action dated August 31, 2005. Claims 1-20 currently stand rejected. Claims 3 and 14 have been canceled. No further amendments have been made.

In light of the remarks presented below, Applicant respectfully requests reconsideration and allowance of all now-pending claims of the present application.

Claim Objections

Claims 3 and 14 have been objected to under 37 C.F.R. §1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant has canceled claims 3 and 14, without prejudice. Thus, the objection to claims 3 and 14 is now moot.

Claim Rejections - 35 U.S.C. §102(e)

Claims 9-11 stand rejected under 35 U.S.C. §102(e) as being anticipated by Moriyama (U.S. Patent No. 6,314,144).

Independent claim 9 recites, *inter alia*, digitally filtering the digital signal at a first interference attenuation factor to produce a first filter output proportional to the magnitude of the interference signal when the interference signal is greater in magnitude than the target signal. In other words, when the magnitude of the interference signal is greater than that of the target signal, the first filter output is proportional to the magnitude of the interference signal.

The Office Action alleges that the above-recited feature is disclosed at col. 2, lines 26-37 and col. 6, lines 37-48 of Moriyama. This analysis is respectfully traversed. Col. 6, lines 37-48 of Moriyama discloses only that the interfering wave is removed by digital filters (12-1 and 12-2) (col. 6, lines 34-36) and that the AGC portion detects an electric power level of the desired wave to perform AGC control, and not a power level of an interference signal as claimed in the claimed invention. Furthermore, col. 2, lines 26-37, discloses that in prior art systems, as the interfering wave increases in magnitude, AGC control is desensitized thereby restraining the gain

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of the desired wave. The cited passage merely indicates that when the interfering wave is large relative to the desired wave, desensitization occurs. The statement in the cited passage that "the AGC control system is ruled by the interfering wave" simply expresses the mechanism by which the desensitization occurs and does not suggest producing a filter output proportional to the interfering wave. There is no mention in either of the cited passages of producing a filter output that is proportional to the interfering wave when the interfering wave is larger than the desired wave. Thus, the cited passages fail to teach or suggest a first filter output proportional to the magnitude of the interference signal when the interference signal is greater in magnitude than the target signal as claimed in the claimed invention. Moreover, the cited passage at col. 2, lines 26-37 of the Office Action discusses the same shortcoming of the prior art that the present application discusses in the background section and, as such, expresses one of the motivations for the present application.

Moriyama is directed to a digital wireless receiving apparatus that performs AGC control. The apparatus of Moriyama includes an amplifier, an ADC and at least two digital filters, in which an output of one of the filters controls the amplifier (see for example, Figure 3). Moriyama discloses ten embodiments in which various methods of AGC control are proposed. Embodiments 1, 2, 4, 5, and 7, corresponding to Figures 3, 5, 11, 13, 17 and 20, respectively, each propose AGC control responsive to a desired wave (col. 2, lines 44-45 and 59-61, col. 8, lines 6-7 and 11-14 and col. 8, line 66 to col. 9, line 2). Embodiment 8, corresponding to Figure 19, discloses another method of AGC control unrelated to an interference wave (col. 9, lines 24-29). The remaining four methods of AGC control disclosed by Moriyama involve measurement of the interference wave, but fail to teach or suggest a first filter output proportional to the magnitude of the interference signal when the interference signal is greater in magnitude than the target signal as claimed in independent claim 9. Specifically, embodiment 3, corresponding to Figure 6, discloses measurement of the interference wave for AGC control responsive to a ratio between the interference and desired waves (col. 7, lines 46-49). Embodiment 9, corresponding to Figure 19, discloses measurement of the interference wave to increase a filter tap number as the interference wave increases (col. 9, lines 37-47). Embodiments 6 and 10, corresponding to Figures 15 and 20, respectively, disclose measurement of the interference wave, however,

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amplification decreases as the magnitude of the interference wave increases (col. 8, lines 46-51 and col. 9, lines 48-61). This is the opposite effect of that claimed in independent claim 9 of the claimed invention. Thus, although the interference wave is measured in four embodiments of Moriyama, filter output is not proportional to the interference wave's magnitude when the interference signal is greater than the desired signal as claimed in independent claim 9. Accordingly, none of the embodiments of Moriyama teach or suggest a first filter output proportional to the magnitude of the interference signal when the interference signal is greater in magnitude than the target signal as claimed in independent claim 9. Thus, independent claim 9 is neither anticipated nor rendered obvious in view of Moriyama. Claims 10 and 11 depend directly from independent claim 9, and thus include all the recitations of independent claim 9. Therefore, dependent claims 9 and 10 are patentable for at least the reasons given above for independent claim 9.

Accordingly, for all the reasons stated above, Applicant respectfully submits that the rejections of claims 9-11 under 35 U.S.C. §102(e) are overcome.

Claim Rejections - 35 USC §103

Claims 1-5, 7, 8, 12-16 and 19-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Moriyama in view of Menkoff (U.S. Patent No. 6,822,692). Claims 6, 17 and 18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Moriyama and Menkoff in view of Linder (U.S. Patent No. 5,990,815). Claims 3 and 14 have been canceled, without prejudice, thus the rejection of claims 3 and 14 are now moot.

Independent claims 1 and 12 recite, *inter alia*, a first filter output proportional to the magnitude of the interference signal when the interference signal is greater in magnitude than the target signal as described above with reference to independent claim 9.

As stated above, Moriyama fails to teach or suggest a first filter output proportional to the magnitude of the interference signal when the interference signal is greater in magnitude than the target signal as claimed in independent claims 1 and 12. Menkoff is directed to a digital filter having series connected filter components. Linder is directed to a monolithically integrated filter circuit. Both Menkoff and Linder fail to teach or suggest a first filter output proportional

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to the magnitude of the interference signal when the interference signal is greater in magnitude than the target signal as claimed in independent claims 1 and 12, and are not cited as such.

Since Moriyama, Menkoff and Linder each fail individually to teach or suggest a first filter output proportional to the magnitude of the interference signal when the interference signal is greater in magnitude than the target signal as claimed in independent claims 1 and 12, any combination of the cited references likewise fails to render independent claims 1 and 12 obvious for at least the same reasons described above. Thus, independent claims 1 and 12 are patentable over the cited references. Claims 2, 4-8, 13 and 15-20 depend either directly or indirectly from respective ones of the independent claims 1 and 12, and thus include all the recitations of their respective independent claims. Therefore, dependent claims 2, 4-8, 13 and 15-20 are patentable for at least those reasons given above for independent claims 1 and 12.

Accordingly, for all the reasons stated above, Applicant respectfully submits that the rejections of claims 1, 2, 4-8, 12, 13 and 15-20 are overcome.


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CONCLUSION

In view of the remarks submitted above, it is respectfully submitted that the present claims are in condition for immediate allowance. It is therefore respectfully requested that a Notice of Allowance be issued. The Examiner is encouraged to contact Applicant's undersigned attorney to resolve any remaining issues in order to expedite examination of the present invention.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

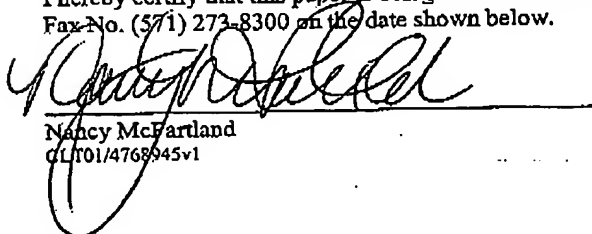


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CLT01/4768945v1

11-30-05
Date